

AMERICAN ENGINEERTM

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Unemployed Engineers

We have received letters, phone calls, membership applications etc. from many unemployed engineers. The level of frustration is very high and as one would expect, seems to be relative to the amount of time the individual has been unemployed.

We hear from many unemployed engineers who want to know "what can I do?" First and foremost, sign up for unemployment benefits immediately. This is not a sign of your professional failure, it is a sign of the times.

Unfortunately many of our bureaucrats either do not know of unemployment of engineers or perhaps choose not to believe there are unemployed engineers. One Congressional office told me from what they were hearing, there should be no problem with an unemployed defense engineer finding work.

Contact your Representative and Senators and tell their staff of your plight. Let them know how many engineering people have lost their jobs in your area. Let them know how long you have been out of a job. Your story is not hearsay; your story is not in the abstract. Your story is real. Get as many unemployed engineers as you can in your area to do the same.

Ask them to limit immigration in your profession; let them know there has never been a shortage of engineers. Send the DS&E High Technology Recruitment Index, an article "Manpower Fluctuations Give Engineers Grief" by Richard Tax in Volume 1, Issue 1 of the "American Engineer." Ask them to support the purchase only of

goods made in this country. Ask them to stop DOD from sending R&D off-shore and purchasing items overseas that could be made here. See the May and July issues of the "American Engineer" for related facts. Send them photocopies of these articles.

Network with as many of your friends, former co-workers and acquaintances as possible. Send a resume to every employed engineer you know. Many of the large companies who have just completed their layoffs will find they need engineers. Often, during times such as these, it is the only way to get a job.

Attend seminars and job fairs such as those sponsored by IEEE. I understand the seminars are very good and have a lot of useful information available. I do not know if they are limited to IEEE members. Contact us, and we will tell you if there is going to be one in your area.

For you computer buffs, there are many Bulletin Boards which have a job or employment section. One is the EET-Net mentioned in another article in this newsletter.

If you have sent resumes to contract firms, contact them by phone about once a week. Their requirements often change daily. You must let them know you are still available and need work.

Last but not least, sign up as a member of AEA. We need help just as you do. We can do little without you, the membership base, to support our efforts.

*Billy E. Reed, AEA President - (214) 264-6428
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Don't Stop The Machine

We in the electronics industry often, and chauvinistically feel that electronics is high technology, but that just isn't true. In fact, we can learn valuable lessons from those navigating the high tech seas in other industries.

One such history is about Burgmaster, a machine-tool maker. The company's story is told in Max Holland's book, "When the Machine Stopped," from the Harvard Business School Press in Boston.

Burgmaster began its corporate life during World War II as the Burg Tool Manufacturing Co. Founder Burg had a better idea for a tool holder. He started making holders in his home and peddled them to machine shops. After the war, he recruited his son and son-in-law, and, by the 1960's, the three of them built the company into a world leader in machine tools and numerical control. They also renamed the company Burgmaster, after its most successful product.

Sound familiar? It should. Burgmaster's entrepreneurial progress closely parallels the early development of many electronics firms.

The 60's brought the age of the conglomerate, and Burgmaster's success drew acquisition and merger offers from several suitors. Houdaille Industries finally succeeded in snagging the company in 1965, and things went fairly well in the months that followed. Houdaille invested in Burgmaster by improving its facilities and manufacturing. However Houdaille's CEO Jerry Salterelli managed his holdings by the numbers (the "modern" way), and his corporate blizzard drove Burgmaster's founders out.

That's when Burgmaster faltered. Salterelli appointed new man-

agers who shared his love of numbers but lacked much understanding of the machine-tool industry. Numbers are important, but so is an intimate knowledge of your market and your competition.

By 1979, Salterelli was ready to retire. To get his money out of the company, he arranged a leveraged buyout for his Houdaille management team.

Leveraged buyouts use tax advantages on depreciable equipment to finance their colossal debt, and they brutally expose a company to the ravages of bad luck. Of the latter, Burgmaster got a triple dose.

The 1981 recession severely curtailed orders. At the same time, Japanese companies entered the U.S. machine-tool business with a vengeance. Finally, 15 years of "modern management" had destroyed Burgmaster's formerly excellent reputation. The strain proved too much, and Burgmaster folded in 1985.

Although it never hammers hard on the point, the book maintains that you cannot manage in a vacuum. You can't beat the competition with ignorance and stupidity even if you're great with numbers. "When the Machine Stopped" is a wonderful parable for the electronics industry.

Steven H. Leibson

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NOTE: Steven H. Leibson is EDN Magazine Edition's senior regional editor.

GE's Wave Of The Future

Electronic Engineering Times published an article by Bob Bellinger in their May 27 issue about General Electric and their efforts at outsourcing computer programming to India as well as importing Indian programmers. His article was based on an article that appeared in GE's March 1991 newsletter "I/T Perspectives."

Nowhere in either the *EE Times* article or the GE article was a shortage of programmers used as justification for the use of these people. The title of the article in the GE newsletter was "Asian Indian outsourcing: high quality/low cost."

The *EE Times* article quoted the article in the GE newsletter: "The average development cost per work year was \$41,000 (over 60 percent) less than typical GE costs." The specific breakdown was savings of 36 percent on those programmers brought to GE facilities in this country (including transportation and living expenses) and 62 percent for the effort accomplished in India.

The article speaks of Mr. Ashok Santhanam, president of Inventa, a Cupertino, Calif. consulting firm who uses Indian software people on both sides of the ocean. Most of the offshore workers earn from \$4,000 to \$7,000 per year compared to \$40,000 and up for U.S. citizen programmers.

According to *EE Times* "Texas Instruments, Hewlett-Packard, AT&T, American Express and Ford Motor Co., among others, have all tapped into the world's third-largest pool of technical personnel." Also, the last sentence of the "I/T Perspectives" article states "Opportunities in the engineering area present similar potential and will be reviewed in 1991."

The *EE Times* article indicated GE would not return calls for comment but Mr. West the author of the GE article told *EE Times* the newsletter was "proprietary" information.

A related article in the same issue of *EE Times* indicates a Mr. Joseph Pelton, director of the Advanced Telecommunications Research Center at the University of Colorado states the use of cheap professional services from the Third World "could become the top international trade issue of the 21st century."

This article gives AEA nearly a half a page of comments on the GE situation which we appreciate. The article speaking of the imported workers quotes "I/T Perspectives" as saying "additional savings have been realized by leveraging the Indian rates against existing agreements with local vendors." Immigration and labor law would have us believe it is illegal to negatively affect the wages or working conditions of U.S. workers.

The GE newsletter also indicates they were able to import the workers with a lead time of only two to four weeks. This seems strange in light of the 25,000 additional visas per year targeted in the 1990 immigration bill to "reduce the backlog of workers" waiting to come to the United States.

We understand over half of GE's employees are overseas. This certainly calls into question whether GE is an American company. We believe this shows they have joined the ranks of other very large corporations we term as "transnational" meaning they are not bound by national borders or owe allegiance to any country.

AEA president Bill Reed pointed out it was the citizen engineers who have provided the expertise to build GE to its present status. We believe GE has a responsibility to those engineers and workers. AEA has urged the Justice Department to look into GE's practices.

Remember, none of the articles speaks of a shortage of programmers or engineers. This is a problem we will either have to deal with or live with.

Notice

We have continuing problems with the U.S. Postal "Service." Some mail has been taking a very long time to be delivered or returned when delivery is not possible. Also they have lost some small amount of mail.

AEA sends a letter, acknowledging we have received your membership dues upon receipt of those dues, and normally within less than a week. If you have not received a letter in response to your membership application within thirty days, please contact us at our Ft. Worth address, so that we may determine whether it was received. We will respond to your inquiry.

Grassroots Network

There are two basic ways to get a Representative's or Senator's attention on any issue: monetary contributions to his or her reelection, or the thing these contributions provide, and that is votes. AEA as an organization must be apolitical, i.e. no contributions and no taking sides in elections. But that does not apply to AEA members.

One of the biggest obstacles in the path of meaningful changes for the engineering profession is the ability to be able to contact each Member of the U.S. House of Representatives in a timely and economical fashion. There are many ways to make our views known, but some are more effective than others.

The most direct and economical solution with the greatest impact is to be able to contact any Congressional Representative in their home district. A few personal visits by engineers from a Representative's district on an issue can have a dramatic effect on how a Representative views that particular issue. It also lets them know there are voters in his or her district who care.

AEA wants to establish a grassroots network of engineers in as many congressional districts as possible to make our views known to each Member of the U.S. House of Representatives and Senate. This effort will not work without your participation. It is an opportunity for each AEA member to make a positive contribution to the profession and their own future.

We are looking for volunteers to serve as "District Representatives" for AEA to coordinate our efforts in each congressional district. Duties would include being the point of contact between the AEA national office and other engineers within a Congressional district and helping to set up meetings between engineers and the Members of the House of Representatives or the Senate. Often this can be done on the weekend when the Member returns to the district for a "Town Meeting."

If there is enough interest we will launch the effort. You will have to be a current, dues-paying member of AEA to qualify for this program. Previous contact with your Representative or Senator will be a plus but is not necessary.

If you are interested, contact AEA president Bill Reed at the Ft. Worth address. Give him your state, your district number, and the name of your representative. If you are not sure of any of this information, your local headquarters for either party will be able to supply it to you. Also let us know whether you are active in your local political arena.

Billy E. Reed

Vote For The Amendment On The 1991 IEEE Ballot

In the March and April 1991 issues of "American Engineer," we published a petition for an IEEE constitutional amendment. This petition was to place the proposed amendment on the 1991 IEEE ballot, provided it obtained enough signatures. Partly as a result of our publicity the petition got enough signatures. So the amendment will appear on the 1991 ballot that goes to IEEE voting members around the end of August. If two thirds of the voters vote in favor, the amendment will pass. I urge all AEA members who are also voting members of IEEE to:

1. Vote in favor of this amendment.
2. Encourage other IEEE members to vote for the amendment.
3. Vote for the best candidates in this IEEE election. Who are the best candidates? Those who show the most likelihood of supporting your career.

This amendment would make the IEEE VP of Professional Activities a voting-member-elected position, whereas right now, this position is filled by a person elected (selected) by 23 members of the IEEE Board of Directors. This can and does lead to an "old-boy-network" syndrome, where the Board selects a new member of the Board. Below is a viewpoint by Robert Rivers, an IEEE Life Fellow, who is also a member of the AEA Publications Committee. He also urges you to back this amendment. Listen to him.

Robert Bruce, AEA Editor

Support IEEE Amendment

The amendment gives IEEE members the opportunity to directly elect the IEEE VP for U.S. Professional Activities, and provides direct selection of leadership that is controlling the expenditure of \$20.00 of each U.S. members' assessment. Next year the assessment is increasing to \$22.00. Shouldn't members have direct say on who is spending their money?

The directly elected Vice President would have increased credibility in the halls of Congress by being elected by 250,000 potential voters rather than indirectly by 23 directors, some of whom are not U.S. citizens. Corporate leadership with P&L responsibility might require immediate response Board control. A member organization that has never in at least 20 years fired a Vice President can and should have direct member control.

The present system is not working to meet your professional goals. Only one example is pensions, almost universally the highest priority item in member surveys. Pensions had a peak budget of \$125,000 in 1980 and less than \$30,000 in 1989, less than 1% of the \$20.00 assessment. Most of the IRA benefits gained earlier by pension activities were lost in 1986. Previously, some U.S. Activities leaders have significantly redirected ongoing approved Professional Programs.

The IEEE is a member organization and as such should do what the members want. The amendment will enhance the ability of the IEEE to do that by promoting discussion and competition on the basis of goals and priorities in the election process in the best democratic tradition. Three of the four President-elect candidates favor direct member election of the Vice President or of a President of U.S. Professional Activities in some form.

It has been said that direct democratic election is an imperfect process but far superior to whatever is next. Even the Russian Republic has abandoned their central committee selection of a leader in favor of direct election. A vote for the amendment is a vote for the democratic process. Please Vote!

Robert A. Rivers (LF), (603) 473-2323

Survival

Jim Michaud, General Manager

Superior Resource Group, Inc., Green Bay, WI

Reprinted from the "Professional Job Shopper" with permission of ALNAK Publishers, Al D'Nak, editor.

WAKE UP! Quit complaining. It's time to draw a battle line, close ranks and amass power. The Fat Cat shops and most major industry groups all have lobbies. Job shoppers, the people doing the work—don't.

Contract Engineering is very probably the most valuable technical tool at the disposal of our Nation's technological/industrial base. How much less would have been accomplished in how much more time, if it weren't for the willingness of a highly educated, intelligent force to be mobile and flexible over the past forty or fifty years? While it's anybody's guess, I know that no one would guess that more could have been done without it.

This invaluable force of people now must come to see the result of their success. The result I speak of is jealousy and fear of losing control by the very industries these people have served. I'm speaking about the increasing wages, which are seen as excessive and the moves by industries and the NTSA to actually begin to place limits on income for members of your brethren—like software engineers.

I won't get into the fact that anyone with a brain in their head or a shoe on their foot could see this as being an outrageous wrong and threat to the American way of life.

I won't try and harp on "let the market decide" or who the hell gave anyone the right to limit anyone's income in this country. I won't ask the fearful questions of where will this lead us or who's next?

I will, instead, ask "what's new?" Haven't you noticed a general disregard for the concerns of the contract engineer/job shopper? Indeed—haven't you noticed a general disregard for the wishes of

any population group...unless they are represented by a pressure group?

Darwin was right about survival of the fittest. Natural selection makes logical sense. As a democracy, we've set a good stage for natural selection. All our societal laws really do is give us a legal right to a chance. That's all. Unless you are a lucky beneficiary of a Federal bailout, Federal subsidy, entitlement, treaty or Political Action Committee, all you get is a chance.

The acid test for fitness is money. No big surprise here. As individuals, the amounts of money we command are infinitesimal compared to the formal groups vying for congressional attention. No big secret here either.

We see our congressmen poised in front of flag draped photos or other patriotic settings and feel secure in the inherent goodness and righteousness of the way things will turn out. This is wrong. Good and bad legislation is in the eyes of the beholder. This happens with the passage of every bill. Congress is the lowest common denominator of the American personality. The general essence. They are the crude distillation of our individual striving, our societal dog eat doggedness. Congress is a microcosm of society and just as we feel compelled and are driven by our own fears, wants and needs, they are also. We only hope that they can suddenly assimilate our wants and needs into their own guts upon being elected and miraculously forget their own natural agendas. FAT CHANCE.

These guys are out for themselves. This is survival of the fittest—Congress is the den of the most fit. You are represented there most effectively by moneyed groups you belong to, whether it be the NRA, SPCA or Boat U.S. Your individual interests are protected only when it is to everyone's benefit and no moneyed groups detriment. SAD, but TRUE. How else can the most wealthy body of powerful people vote themselves a huge pay increase in the face of outspoken, overwhelming, popular opposition and then with a straight face decide to limit software engineers to straight time pay scale! Smell the coffee.

Job shoppers are an independent breed steeped in that great American ideal—but it's over kids. The world is closing the gap—competition is heavy. The pressure downward on everyone's standard of living as the world takes more of our pie is not going away. If you remain weak by being independent, your part of the pie will be offered up first—in the name of whatever is convenient at the moment. Mostly, it will be in the interest of "competitive pricing," "heavy overhead," "work slow down," "balance of trades," "decline in market share"—take your pick. The result will be the same shrinking benefits and lower pay. This is especially true now that Senator Kennedy has opened the foreign flood gates to alien technical people.

Circle the damn wagons. Don't worry about joining another organization and all those meetings. All this one requires is money. If everyone sends in ten bucks a year, you'll have plenty. Hire a couple of lobbyists—slap together some by-laws, mission statements or whatever is needed. Don't worry about membership meetings or the rest. The important ingredient is representation in Congress with money in the hands of people you own and an ability and willingness on their part to deal with man eaters. You'll be dancing with wolves, but at least you'll be invited to the dance.

I wouldn't wait. Where do you start? Start right here. Step forward and offer to be an interim head, and set-up this organization. Set up a bank account, hire a lawyer to do any required paperwork and call for members to send money. I would not cast your lot in with some related crowd. First of all, you are big enough to be a fit group on your own. Second, why water down your needs by inevitably having to accommodate the interests of some related group. Believe me, there is enough diversity already among yourselves.

If you don't rally together, you have no one to blame. The hand writing is on the wall, and if you are half as smart as you give yourselves credit for on your resumes, the timeliness and need for this shouldn't be a concept too hard to handle.

Now—who will come forward?...Just as I thought

Superior Resource Group is what we consider one of the "good guy" shops and offers a benefit package to its Shoppers that is probably one of the best in the business. Al D'Nak

More From Jim Michaud

After seeing this editorial in the "Professional Job Shopper" Bill Reed of AEA contacted me. We both agree that it's not just contract engineering that's experiencing a need for a political voice. Our problems and concerns are the same, whether you work on contract or direct or are a drafter or software developer.

I asked Mr. Reed to send AEA information to me, so I could review it. After reviewing the information, I endorse the AEA and would amend my editorial as follows. You do not need to start a new organization to form a power base. This is good news. I didn't honestly hold out a lot of hope for some courageous person to take themselves by the bootstraps and get the organization started anyway. There just ain't many souls like that left.

The bad news is that you do need to empower this voice. AEA is relatively small when you consider that there are in excess of 2,000,000 of you out there currently powerless, but potentially powerful in the extreme. The AEA needs members and money. Talk it up, pass some literature around to people you work with, contract or not. And if you're not a member—than join.

The only real work you'll have to do is work for an hour or so each year to pay your annual dues and the continued duty of being informed, so you can help protect the American technical job.

I am a job shop manager and salesman. You hear this appeal coming from me on behalf of you and your brethren—and you should know there is absolutely nothing in it for me if you join EXCEPT THIS: If the American technical worker is subverted, then my service is also. Also, I cannot stand by and watch what we all have disintegrate without doing my share. If I can get you involved in empowering a group, then that helps me.

Help your profession stay strong and help the voice that represents it, be a true and powerful one.

James E. Michaud, General Manager

Age Discrimination And The Engineer

Age discrimination has two facets.

One is engendered by incompetence of upper management having on its side special class of personnel and outside groups associated with them and supportive to them.

The other—by corrupt middle management and supervisors.

They supplement each other and are portions of two murky 'hemispheres' of our shameful and autocratic world we engineers all bear on our shoulders—the American System of Employment.

Let's examine the substance of each:

Upper Management and their Puppets

This group consists of personnel managers; high positioned executives; company presidents; vice presidents; chairmen; corporate board of directors, executive 'recruiters'; a wide range of outside 'researchers' and 'consultants'.

By profession they are typically money managers; economists; lawyers; psychologists; business administrators; investment bankers; human resource 'specialists'; personnel administrators, and so forth.

Sparked by the immense power they hold by chance or manipulation over the powerless 'little guys' around, they pose with an eminent authority to plot out the life-span of engineering professionals.

In line with their shabby knowledge of (the) surrounding world, they advocate with deadly accuracy the number of years an engineer is judged to remain 'useful' to 'business'. That is "15" years—they declare passionately, themselves touched profoundly by their wisdom.

Thus was born the misery of US engineers over forty.

Engineers with 2-3 years, and with 5-7 years experience became the utmost in demand as advertised by US industry. Engineers usefulness became comparable to that of a horse or prostitute—the younger, the better.

When these 'experts' discovered that the number of young and bright engineers out of US colleges are diminishing, they, evoked by 'patriotism', sounded the alarm across the nation up to the White House, and the President, about the 'shortage of engineers.'

Thus was taken recently the important measure in immigration policy by our attentive federal government: Coerce 'young' and 'bright' engineers from abroad, dozens of thousands of them. Practical and easy (they think).

Hence, once more is manifested the arrogant and brutal ignorance of American Industry nurtured by their puppets—the powerful elite. Faithful to their self-centered moral imposed upon the society, they proclaim: "What is good for business is good for America."

They remain forgetful that this motto of theirs is exactly the opposite to the moral and political foundation of American democracy, and as such is hostile to it. In the 'good old days' Americans thought: "What is good for people is good for America!" (You remember: "For the people, by the people....?")

The upper management of American Industry enticed by a band of 'expert' elite, promoted a host of 'theories,' 'findings',—all seemingly serving 'sound business judgement': "For the business, by the business..."

They found that engineers of 'old' age (over forty) lack 'vitality', have 'shrinking memory', have 'low productivity', and after all they are 'expensive'—high salaries, family insurance, pension, extended vacations, etc. Of course, they missed one thing they dared not to mention—that 'old' engineers are less 'submissive' to manipulation, inclined more to independent judgement the profession calls for.

Hence, was rooted deep into the American Employment system the slaughter of American Engineers.

Denying work for engineering professionals over forty or fifty (not to say over fifty) became known as 'age discrimination' in employment, rampant across the USA—no matter how many half-hearted pharisaic 'civil rights laws' the government enacted.

Surveys and research on engineering 'efficiency' by non-engineers and charlatans became fashionable in America.

One of these shadowy figures has discovered, last year, that the 15 years given by the industry as the 'useful' life span for engineering professionals was too 'generous'. Five years, at the most—this 'researcher' proudly announcing the results of his work. The technology is changing so rapidly, he explained with prudence, that what the student learns in college becomes 'outdated' after five years.

Very talented dislosure indeed!

Thus has been 'legitimized' the big demand for engineers with 2-3 years or with 'recent' experience as advertised in the US by industry.

Another 'surveyor' discovered that an engineering professional in a given establishment reaches his peak performance only after ten years of service. The scandalous inference here is that the older the engineer, the less useful he becomes because of the smaller time span left to be in service subsequent to the engineer's 'peak performance' reached in ten years.

This is the factual and tragic picture that American Engineers are confronted with in the present dull and autocratic system of employment imposed upon them. Well established engineering organizations like the IEEE, turn a 'blind eye' and are 'stone deaf' to these atrocious realities. Moreover, the IEEE is always eager to publish these 'findings' without critical analyses.

Gerald Aksherian

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A 10-Second Commercial

The next time an associate of yours complains about the profession, hand him/her your copy of the AMERICAN ENGINEER. Say "Please read this publication and copy whatever you wish to use. Pass this on to your next associate who complains about the profession."

Reader's Voice

We set aside this column in each issue of the "American Engineer" to allow readers to voice an opinion on any professional issue they choose. Letters should be a maximum of 500 words, relevant to a current issue that affects the professional life of an engineer. Articles submitted may be longer. They should be in good taste and not slanderous. Each submission should include the name, address, home and business phone of the writer. Except for short excerpts, we will include the writer's name, city and state in each published item (unless the writer requests anonymity). We reserve the right to edit each submission, as long as we don't change the gist of it, and to publish or not publish it. We assume that authors who send us material have accepted these conditions, unless they instruct us otherwise in writing.

M.W., TX: - "Suggest we include an application to go out with 'The Professional Job Shopper' (Al D'Nak's newsletter) with a phone number and we would pick up more members."

Editor: Great suggestion - DONE! We'll try other publications as well.

From M.H., MI: - "I'm glad there is finally an engineering association that looks out for the engineering profession politically instead of technically...I've read your newsletter, and I agree we have to stop talking and start doing something. Toward that end, I hope to recruit five others in the office to join AEA...I do have one suggestion: print up a flyer that can be easily reproduced and posted about AEA and how to join."

Editor: Publicity flyers are being prepared - the five extra members will help.

From J.B., VA: - "Thanks for the "American Engineer." It is very helpful. I have been arguing at work that there is no 'shortage' of engineers. I have also been probing for decent Supply/Demand models. Rivers seems to have developed a good one."

From J.Z., FL: "I have been reading your monthly newsletter for several months and have decided to join your organization. I like the format of the newsletter, but most of all I believe the Engineering Profession needs an organization that will be the focal point for improving working conditions for engineers. I believe your organization is the one that can accomplish this objective."

From L.B. in Ca.: - "I find AEA to be a superb replacement to CCEE a committee I supported for years while actively employed. Cur-

rently being unemployed, my support must be limited to 'Member.' Keep up the good work. Let's get the engineering community UNITED and speak in one voice.

From S.C., MN: - "Please send ten issues of the American Engineer.....I will distribute them to engineers who may be interested....If you send 25 issues in September or October, I will place them on a table at an engineering society meeting."

From B.P., FL: - (I am a) "retired teacher & engineer & (am) presently a volunteer engineer because I am unable to find an engineering job for pay....I would like to assist AEA."

From S.A., MD: - "Enclosed is my application and check for membership in the AEA. I was a charter member of Irwin Feerst's CCEE, and I strongly believe in his sincerity and the causes he championed. I like your newsletter, and it appears that the AEA is a worthy successor of the CCEE. I wish you every success with this new organization, for the sake of all of us, and I will help in any way I can."

From D.C., Snellville, GA: - "I'd like to join the AEA, but this will have to wait until I find employment. I was laid off in October of 1990. I'm 39 years old with both a BSEE and MSEE, but I've been unable to locate any engineering work in the area. The three to five years experience line in most ads seems to be very much held against me."

Editor: See July issue of "AE", page 6 for an article by Bob Rivers entitled "Wanted, Engineers With Three To Five Years Experience"; that phrase appears to be illegal. Also, reach out to Richard Plummer, our Anti-Discrimination editor. - R.T.

From L.W., CA: - "I'm a retired Army Colonel (Signal Corps) and have a degree in EE. I'm one of the lucky ones able to make my professional education a worthwhile endeavor. I've supported Feerst financially through the years and now it is time to support you and your organization. P.S. I'm a Sr. Life Member of IEEE."

From B.W., Simi Valley, CA: - "...I really want to support AEA financially, but I can't. I am unemployed, money is tight, and I have no job in sight. I appreciate your work, but I can't help you right now. Please continue sending AE, I will pay my own way as soon as I can."

Editor: You got it. I have taken the liberty of including the towns of two readers that are out of work. If any of you can help them find employment, even of a temporary nature, please contact me. Those of us that are unemployed need AEA more than ever. - R.T.

*Robert Bruce, AEA Editor
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Goal — 50,000 Members In 1991

Did you introduce AEA to an associate this month?

APPLICATION FORM

AMERICAN ENGINEERING ASSOCIATION
P.O. Box 820473, Fort Worth, TX 76182-0473

Name: _____ U.S. Citizen: _____ Naturalized Citizen: _____

Address: _____ Apt: _____

City: _____ State: _____ Zip Code: _____

Home Phone: _____ Work Phone: _____

MEMBER (\$20.00) PROFESSIONAL MEMBER (\$50.00) SPONSORING MEMBER (\$100.00)

The difference between membership grades is the financial support and dedication to the issues. All members receive a subscription to the AEA publication "American Engineer."

SIGNATURE: _____ DATE: _____

Annual membership begins on receipt of Application
Dues in the American Engineering Association are tax deductible.

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EET-NET

Are you curious about AEA? Do you have information which you think AEA should have? Do you want information from or about AEA?

Electronic Engineering Times has established an online network for engineers through CompuServe. The cost of the network is a very reasonable \$7.95 per month plus \$.30 per hour of connect time. (Plus phone charges if not local to you.)

AEA president Bill Reed is on the network with the ID number 70202.371. Should you wish to contact AEA for information or leave information for AEA or just to say hello, we would like to hear from you.

If you are not on the network, *EE Times* gives this set of instructions for signing up:

1. Set your telecom software for a baud rate of 300, 1200 or 2400 bps, 7 data bits, even parity/1 stop bit, full duplex.
 2. Dial 800-346-3247. When the modem connects press (ENTER). At the HOST NAME prompt PHONES. Follow the menus to find the local number nearest you. Hang up and dial, using the number you just found.
 3. When you receive a CONNECT or CARRIER DETECTED message, press (CTRL C). If the HOST NAME prompt appears enter CIS.
 4. At the USER ID prompt, enter 177000.6400.
 5. At the PASSWORD prompt, enter EET*NET.
 6. At the ENTER AGREEMENT NUMBER prompt, enter EET0090.
 7. Follow the directions that appear on the screen.
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It should be noted the EETNET message center is very public. Anyone on the network may read any message left there. I understand the CompuServe E-Mail system is private and is accessible from EETNET but there are additional costs.

We look forward to hearing from you.

Attention Retirees!

We received the following letter from W.R. in California, and rather than include it as part of the "Reader's Voice" column, we decided to do an article around it. The letter is as follows:

"Gentlemen:

As a retired Electronics Engineer, I wish to give my support to your efforts to improve the condition and status of my former colleagues. An organization such as yours is long overdue. I joined the IEEE while in College and watched it use my dues for the benefit of the Academic and Management Types for my entire career. I supported the late Irwin Feerst both before and after my retirement five years ago.

I have enclosed a check for \$40.00. I wish you to use half for membership and the remainder for your legal defense fund, which is an excellent idea.

Good Luck."

This letter is not unusual. A significant number of our members are retired engineers who support our efforts to improve the profession. They support us because they have seen the profession decline during their careers and want to improve it for those who follow.

It occurs to us that the retired engineer who has this outlook and concern for others could perhaps be utilized on a volunteer basis. After all, who has experienced the problems in the profession; who has witnessed the decline of the engineers professional status? Who else knows what it was like and what it is like today? I think the retired professional would have a tremendous amount of experience and insight to contribute to the solution of these problems.

Any of you retired engineers who would like to maintain a link to the profession and who have a concern for the current health of the profession and a few hours a week to donate to improving the profession for others, let us hear from you. Let us know of your experience working with professional issues and any political contacts you may have.

Billy E. Reed

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Foreign Competition For Developing Technology

On July 17, 1991 the AEA and the North Jersey Section of the IEEE held a joint meeting to discuss "Foreign Competition For Developing Technology." Bob Bellinger, a reporter from *Electronic Engineering Times*, attended the meeting and wrote the following article. This is reprinted here with the permission of *EE Times*, CMP Publications, 600 Community Drive, Manhasset, NY 11030.

The Israeli Affair

by Bob Bellinger

Recently, at a joint meeting of the IEEE and American Engineering Association in northern New Jersey, Bernard J. O'Connor, retired president of Allied-Signal Aerospace's Bendix Guidance Systems Division, described how his company lost a contract to supply a guidance system to an Army project led by Raytheon.

Company presidents don't usually talk about the ones that got away. But O'Connor believes that what happened in 1990 has dangerous implications for American technology companies. Allied-Signal GSD was outbid by the Israelis. And it was a fight that O'Connor thinks was stacked against the U.S. company.

It wasn't so much that Allied lost money on the deal, says O'Connor. The bidding drove down prices so much that Allied is probably better off economically without the contract.

What saddens O'Connor most is that engineers at the former Bendix plant in Teterboro, N.J., won't have a chance for more hands-on, exciting work. The biggest difference between the young engineers of today and when O'Connor was just starting out at Bendix's jet-engine division in 1947 is "lack of hands-on experience." Too many EEs today are glued to a workstation tube and never get a chance to tackle systems-integration problems, O'Connor maintains. He cites three reasons for the trend:

- Fewer development projects. There's less work around for engineers. The Guidance Systems Division, still called Bendix by the locals despite the buyout by Allied a few years ago, has shrunk from 7,000 hourly employees to 300 today.

- Longer product cycles. EEs devote years to one project. Their exposure to a variety of technical issues and pitfalls is much more

limited than what O'Connor tackled 40 years ago, as a young MSEE out of Yale.

- Lack of exciting programs. Much of today's work is upgrades of existing systems. There is no "race to the moon" to inspire engineers. "If the trend continues, who is going to be around in the technical community 20 years from now?" he asks.

O'Connor sensed a golden opportunity in 1990, when Raytheon put out a bid for a gyroscope system for the Patriot. Here was a project that could provide GSD engineers with inspiring work for years to come, he believed.

Working against a deadline, the Teterboro division engineers worked 60 to 80 hours a week for six months to develop a prototype of what they called the North Finding System (NFS) for Raytheon. Basically, Allied's GSD took an 1985 gyroscope model, tweaked it so that it could meet all of the Army's parameters, and submitted it. In the end, there were three candidates for the multimillion-dollar contract: Allied GSD, the Israeli company, and a German company, which fell by the wayside quickly.

To make a long story short despite what O'Connor feels was a superior design, the Israeli company bagged the order. This, despite the fact that the Army didn't submit the Israeli design to shock and vibration testing, as specified in the original outline.

The loss was not a shock to O'Connor. He and Allied personnel had lobbied hard in Washington, but "we became convinced that we were in a political game."

Though the Israeli system couldn't match Allied's NFS technically, he claims, it was less expensive. And O'Connor thinks one reason the Israelis could undercut the American company's bid is: "Our tax dollars subsidized Israeli companies."

Congress passed a bill several years ago that allows Israel to "offset" some of the \$2 billion it gets from the United States to support its defense industry. "It's unconscionable that I had to compete against them with *my* money," O'Connor says.

The subsidies are due to run out in a year or two. But for O'Connor, the episode shows an appalling lack of concern about America's eroding technical base.

Goal-50,000 Members in 1991

Did you introduce AEA to an associate this month?

AEA Legal Defense Fund

The AEA Legal Defense Fund is to provide finances to litigate selected cases, where engineers have been professionally harmed. This fund will provide for the defense of engineers and related occupations or to file litigation related to foreign imports, whether people, goods or services; discrimination; terms of employment; pensions; patent rights; and tax issues which are detrimental to engineers and related occupations.

Since the above issues are crucial to advancing the professional standing of engineers, we ask you not to forget the Fund. We need your help in the form of contributions in any amount. You could be the next person who needs help. The funds will only be used for cases that the Board of Directors believe will have broad benefit to the engineering community.

To make a contribution, make your check payable to AEA Legal Defense Fund and mail to P.O. Box 820473, Fort Worth, TX 76182-0473.

All contributions over \$10.00 will be acknowledged by return mail. Allow thirty days from mailing, to receive your response.

Sponsor A Member Of Congress

One of our members, J.C. from Texas, has presented us with a terrific idea. He has enclosed a check for twenty dollars to sponsor a gift subscription of the "American Engineer" for Senator Moynihan of New York. He indicated he wanted the "good Senator to know what is going on in the real world."

How about another 540 of you sponsoring a gift subscription for your Senator and/or Representative? We will write a letter to that Member of Congress and tell them who the subscription is from. We will send you a copy of that letter.

If duplication of sponsors occur for any Member of Congress, we will pick one from your State, if available. If not, we will pick one from a State in which we have fewer members. If we cover all Members of Congress, we will mail subscriptions to other critical officials. We will inform you of who you are sponsoring. Oh, yes, you may sponsor more than one Senator or Representative.

Our Senators and Representatives hear from industry and academia daily. Let's let them hear from the working engineer at least monthly.

Billy E. Reed

Reach Out

AEA would like to reach people in all engineering disciplines. We would also like to obtain the names and addresses of the publications and editors that serve the many engineering disciplines. To do this, we need the help of our membership. This is an opportunity for you to participate.

Please, clip and mail the masthead with the mailing address and editor's name of your favorite engineering or technical publication to AEA. Eventually, we will be able to reach them and keep them and their readers up to date on AEA events.

Reach Out to your congress, senate, other representatives and the news media. Your "American Engineer" is our way of reaching you with facts, articles and information concerning engineering issues. You can copy these articles and send them to your representatives and the news media to support your concerns.

Reach Out to an associate and encourage them to join and support the AEA. If you're the bashful type, just place your "American Engineer" or a copy in their mail to be read at their convenience. You can also Reach Out to an associate in another department, company, division or state by mailing them your copy of AE. We encourage you to copy AE for a friend or associate in the hope that they will also support our efforts.

Reach Out to the active volunteers that are making this publication possible. Tell them what you like or what you dislike. Provide them with questions, answers and information or just a hand written

note of appreciation. Believe me when I tell you that it is important to let your volunteers know that you care.

Reach Out to the following:

Roger Boisjoly PE, 3047 E. Menlo St., Mesa, AZ 85213
(602) 641-0887* - *Ethics & Legislation re: Whistle Blowers Act, Improvements*

Robert Bruce, P.O. Box 4493, Great Neck, NY 11023 - *"American Engineer" publication and related issues*

John Densler, 42 Maple St., Auburndale, MA 02116 (617) 244-4417* - *Immigration Issues & related Legislation; Importation of foreign students/engineers*

Al D'Nak, P.O. Box 465, Plainview, NY 11803 - *Contract Engineering, Legislation Section 1706, P.L. 101-583, Free O.T.*

Richard Plummer, P.O. Box 326, Valley Forge, PA 19481 - *Discrimination/Issues/Legislation*

Bill Reed, Pres, AEA, P.O. Box 820473, Fort. Worth, TX 76182-0473 (214) 264-6428* - *Industrial Base, Import/Export Jobs Technology Transfer*

Robert Rivers, AIRCOM, P.O. Box 129, Union, NH 03887 - *Manpower Issues & Legislation; Employment - Underutilization; Engineer Shortage Propaganda (ESP)*

Richard Tax, V.P. AEA, P.O. Box 2012, River Vale, NJ 07675
(201) 664-0803 - *Issues, General & further information*

* Please use your nickel; our budget is small.

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